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Article

Consecrated life today. Comparision of general health characteristics between non clerical and clerical samples

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Simple Summary: A Simple summary goes here.

Abstract: dfdfdf

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1. Introduction

Persons who consecrated themselves through their lifelong commitment to God and to a certain religious institute represent a minority group belonging mostly to the Roman Catholic Church [1,2]. This group differs from the major society in more aspects and its way of life arouses many questions [Cist *et al.* [3];elias2019monasticism]. To the main specifics of living in a religious institute belong the fundamental role of spirituality [4] and religiosity [5], the hierarchical structured community and subordination to the authority, the binding statutes and daily routine [Wrobel [6];fernandez2019convents], gender uniformity and resignation on sexual relationships and family life [7]. Expected is also a high level of social engagement [8] as well as a certain social isolation and/or self-excluding from the mainstream [9,10]. Catholic order members can be regarded as a homogenous population with a number of common characteristics on individual and socioeconomic level [11].
Research on health among consecrated people attracts some attention but the studies are sparse and rather ambiguous. The majority of the existing studies brings positive conclusions. The religious order members might be at lower risk of mental health disorders [12], more successful in achieving physical and mental well-being [13] and able to care systematically for their health [14]. The prevalence of positive emotions was observed among the nuns [15] as well as a higher level of personal happiness [16] and satisfaction at work engagement [17] together with lower tendence to professional burnout [18]. Several studies chose the religious communities as a sample of people living a meaningful and cognitive stimulating life and came to the results of lower risk of Alzheimer disease or dementia among them [19,20]. It corresponds to the findings about higher ability of consecrated persons to age meaningful [21] and about their longevity [22,23]. On the contrary, there are very few studies pointing at some deficits in health practises of religious order members [24], at the danger of exhausting the spiritual resources through excessive work engagement [8] or at the impact the community conflicts have on the health of individuals [11]. However, the existing results cannot be generalized. There is need of more data from different countries and social-political contexts. Most of the previous research

studies were carried out in the USA, some of them in Poland, Germany and Italy. In all these countries, in spite of the advanced secularisation in some of them, the presence and the social engagement of religious institutes have an established tradition and a high level of public credit, which seems to play some role [12]. On the contrary, data from secular post-communist countries are missing as well as data from African, Asian or South American communities. We presume, there are also some other bias to consider, such as a high level of social desirability and non-representative samples because the voluntary questionnaires are rarely completed by all members of the community. The healthier and more active persons are more likely to participate. The current study examines the general health characteristics of religious brothers and sisters in the Czech Republic in comparison to control samples of the Czech population and a sample of consecrated persons from the Slovak Republic. The Czech Republic as the country with the highest percentage (76,4%) of religiously unaffiliated people in the world (Pew Research Center 2014) represents a not very supportive milieu towards the Roman Catholic Church and religious institutes. Slovakia belongs traditionally to the Catholic countries (62% Roman Catholics and 13,4% atheists in the census 2011) and the consecrated persons are more numerous and more appreciated than in the Czech Republic. Nevertheless, the modern history of these two countries is firmly connected and the convents and monasteries in both of them are still carrying the consequences of the long persecution, overworking and forced isolation during the communist regime. Compared to the previous studies, in view of these facts, we suppose a higher level of negative health affecting factors and lower scores of well-being and life satisfaction among the members of the Czech, possibly Slovak religious communities. We also presume some slight differences between the Czechs and Slovaks.

Therefore, the aim of this study is to explore the possible relations between the membership in a convent or monastery religious community in a highly secular post-communist country and both the physical and mental health of the individuals.

2. Methods

2.1. Measures

2.1.1. Health complains

The frequency of recent health complains was assessed by the 12-item measure: headache, stomachache, backache, intestinal problems, feeling depressed, irritability/bad mood, nervousness, trouble falling asleep, dizziness, sore throat/cold, heart pounding/chest pain, tingling in limbs or face. The question was: “In the past month, how often have you had the following issues?“ Each item was answered on a five-point scale: never (1), about once or twice (2), approximately once a week (3), more than once a week (4), every day (5). For analytical purposes, participants responses were dichotomised. Answers ranging from 1:”never" up to 3: “approximately once a week” were recoded as “Not many times per week” and answers ranging from 4: “More than once a week” up to 5: “every day” were recoded as “Many times a week”.

2.1.2. Long lasting ilnessess

For the occurrence of chronic illnesses, a 26-item measure was used introduced by the question: “Do you have a long-term illness or disability? Please tick all that apply to you.“ The illnesses are listed in table XY.

2.1.3. Mental problems solving

The need to find help in case of mental problems was assessed by two additional questions responded yes or no: “Are you taking any psychiatric medication now or have you used it in the past? Have you ever visited or are you currently visiting a psychologist or psychotherapist?“

2.1.4. Geberal health (GH)

The GH was assessed by composite variable created by summing up number of chronic illnesses. This variable was consequently divided into several categories based on the following key:

2.1.5. Chronotype

Daily energy was measured by choosing between two possibilities – an early bird who wakes up early but is tired in the evening, or a night owl who has problem with waking up early but enjoys working in the evening.

2.2. Participants

2.2.1. Sample one

First sample (n = 1800, Age: M = 46.41, SD = 17.4, Females: 51.28%) consisted of participants from Czech nationally representative sample of the study on health, life experience, attitudes and lifestyle collected in 2016 [25]. In this dataset we did not find subjects responding incongruently to the control items i.e. feeling the God presence despite being Non-religious or atheist. Thus, no participant was excluded from a dataset.

2.2.2. Sample two

The second sample was collected in April 2020. It was a survey made in the Czech population during the first Covid 19-lockdown. From the original dataset (n = 1263), we excluded 120 participants who responded incongruently to 3 repeatedly asked questions and those, who were speeders i.e. time spend filling questionnaire was < 10 min. The three control questions included age (difference > 2 years), weight and height (difference > 2 kilogram and centimes). Hence, the number of participants was 1143. Based on the results of outliers screening procedure (see statistical analysis secion), we also removed subjects, which responded to large number of questions in the same way (n = 2). Therefore, the final number of participants was 1141 (Age: M = 49.2, SD = 16.73, Females: 46.45%).

2.2.3. Sample three

The third sample (n = 1662) was collected during May 2021 (zde moc psl dopln další info). After data were collected, we excluded participants (n = 166) reporting incongruent answers and those who were classified as speeders. The criteria were the same as in the second sample. This resulted in 1496 (Age: M = 50.67, SD = 15.79, Females: 44.05%) participants. No participant with uniform responses was detected.

2.2.4. Sample four

A sample of Catholic order members in the Czech Republic and in the Slovak Republic was recruited to take part in a survey regarding various aspects of today´s consecrated life. The respondents were recruited by contacting the major superiors of all male and female religious institutes in both countries. After six weeks, the information about the survey was sent directly into the local communities in order to increase the number of respondents. The research was done under the auspices of the Conference of Major Religious Superiors of the Czech and Slovak Republic. The superiors were asked to spread an online or a paper-and-pencil questionnaire among the members of their communities and to support its completing. Data was collected from March to May 2021. This sample initially consisted of 497 participants. In the first step, we excluded participants (n = 4) who were classified as speeders i.e. finished questionnaire typically lasting more than 30 minutes in < 10 minutes. After this exclusion, 493 participants remained. We also removed participants who filled questionnaire multiple times (n = 63) resulting in (n = 430) of subjects . This sample consisted of 180 Czech participants and 213 Slovak participants. Other than Czech and Slovak participants

were excluded (n = 37) resulting in 393 subjects (Age: M = 47.52, SD = 9.57, Females: 78.88%). No uniform pattern of responding was detected in this sample. The mean duration of being part of clerical community was 24.45.

2.3. Statistical analysis

As suggested by Shapiro-Wilk test and by histograms, normality assumption was broken in all samples. Thus, non - parametric methods were used. Homogenity of variances was equal in all samples as indicated by the Breusch-Pagan test. As the null hypotheses of the MCAR test in all our surveys was not rejected, we deleted missing values listwise. Outliers were explored by the Median Absolute Deviation (MAD). Outliers identified by the MED were consequently screened and if there were signs of uniform pattern of responding i.e. answering the number of items in the same manner, than outlier were removed from the dataset.

To explore differences in health status among clerics and non - clerics, we compared in logistic regression models long lasting illnesses of clerics to reported long lasting illnesses of participants from representative sample. In these models, reported long lasting illness was was as a dependent variable, grouping variable distinguishing clerics from non - clerics was regressor and covariates were are, gender, education and length of a life in clerical order. Multinominal regression was used to compare clerincs and non - clerics to composite variable created as summ of all illnesses and reflecting general health.

3. Results

The table 1 depicts basic socio-demograpthic characteristics of the study samples.

Table 1. Socio-demographic table

	Sample 1	Sample 2	Sample 3	Sample 4 (CZ,SK)	Sample 4 (CZ)	Sample 5 (SK)
Characteristic	N = 1,800	N = 1,141	N = 1,496	N = 393	N = 180	N = 213
Gender						
Female	923 (51%)	530 (50%)	659 (44%)	310 (79%)	126 (70%)	184 (86%)
Male	877 (49%)	523 (50%)	835 (56%)	83 (21%)	54 (30%)	29 (14%)
Family_status						
Not in relationship	439 (24%)	267 (25%)	201 (13%)			
Married	929 (52%)	461 (44%)	714 (48%)			
Divorced	158 (8.8%)	201 (19%)	252 (17%)			
Widow/Widower	133 (7.4%)	73 (6.9%)	91 (6.1%)			
In relationship	141 (7.8%)	51 (4.8%)	236 (16%)			
Education						
Basic school	141 (7.8%)	90 (8.7%)	91 (6.1%)	1 (0.3%)	1 (0.6%)	0 (0%)
Vocational school or non - maturity high school	442 (25%)	400 (39%)	572 (38%)	12 (3.1%)	5 (2.8%)	7 (3.3%)
High school	854 (47%)	377 (36%)	451 (30%)	48 (12%)	24 (13%)	24 (11%)
Higher vocational school or University	363 (20%)	169 (16%)	380 (25%)	332 (84%)	150 (83%)	182 (85%)
Economical_status						
Without work	261 (14%)	149 (14%)	172 (13%)			
Pensioner	430 (24%)	325 (31%)	420 (32%)			
Working	1,109 (62%)	559 (54%)	707 (54%)			
Faith						
Yes, I am a member of church	170 (9.4%)		132 (9.4%)			
Yes, but I am not a member of a church	361 (20%)		331 (24%)			
No	1,004 (56%)		680 (48%)			
No, I am convinced atheist	265 (15%)		262 (19%)			

3.1. Chronotype differences

In the first step of the analysis, we compared clerics with non - clerics in their self - reported chronotype. Pearson, chi-square test revealed that there was no difference between these two groups across the two surveys see Table 2.

Table 2. Differences in chronotype across samples (N = 2731)

	Chronotype		
Characteristic	Early bird, N = 1,496	Night own, N = 1,235	p-value
Source			0.2
Panel	498 (33%)	453 (37%)	
Vacctination	812 (54%)	632 (51%)	
Consecrated	186 (12%)	150 (12%)	

3.2. Chronical ilness differences

Regression analysis indicated that there is a significant positive relationsihp between being cleric and lower probability of suffering from chronic illnesses such as hypertension, diabetes or arthritis. However, there was positive relationship between being cleric and depression/anxiety see table 3 for more details.

Table 3. Depicts associations (in Odds rations) between living in clerical life and chronical mental and physical deseases

	Allergy	Migraine	Pain of unclear origin	Pain in the small pelvis	Cancer
Crude effect	1.28 (0.97, 1.67)	1.00 (0.70, 1.41)	0.74 (0.40, 1.27)	3.12*** (2.04, 4.72)	1.34 (0.60, 2.68)
Adjusted effect	0.97 (0.49, 1.90)	0.38* (0.15, 0.94)	0.75 (0.16, 2.86)	4.11** (1.55, 10.6)	0.14 (0.01, 1.18)
	Hypertension	Diabetes	Arthritis	Astma	
Crude effect	0.98 (0.73, 1.31)	0.33*** (0.17, 0.57)	1.30 (0.84, 1.95)	1.03 (0.68, 1.51)	
Adjusted effect	0.30** (0.12, 0.69)	0.18* (0.03, 0.85)	0.08*** (0.01, 0.32)	0.75 (0.27, 1.95)	
	Depression/Anxiety	Ischemic heart disease	Obesity	Stroke	
Crude effect	1.79** (1.22, 2.59)	0.77 (0.37, 1.45)	1.75*** (1.25, 2.41)	0.79 (0.19, 2.33)	
Adjusted effect	1.19 (0.46, 2.95)	0.06* (0.00, 0.53)	0.70 (0.28, 1.63)	0.00* (0.00, 0.27)	
	Back pain	Gastric or duodenal ulcers	Chronic lung disease	Skin diseases eczema	
Crude effect	1.17 (0.92, 1.48)	1.14 (0.58, 2.08)	1.56 (0.62, 3.47)	1.33 (0.90, 1.92)	
Adjusted effect	0.97 (0.53, 1.78)	0.22 (0.03, 1.17)	1.51 (0.50, 4.29)	0.61 (0.22, 1.58)	

Note: p < 0.05 *, p < 0.01 ** p < 0.001 ***, Adjusted effect was calculated using the following variables as a covariates: Age, Gender and Education. Values in brackets indicates 95% confidence interval

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4. Discussion

5. Conclusion

6. Patents

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Characteristic	Representative, N = 1,800	Panel, N = 1,141	Vacctination, N = 1,496	Consecrated, N = 393
source				
who_covid_panel	0 (NA%)	1,141 (100%)	0 (NA%)	0 (NA%)
ICHS	68 (3.8%)	47 (4.8%)	57 (3.9%)	10 (2.9%)
hypertension	371 (21%)	243 (25%)	378 (26%)	69 (20%)
stroke	20 (1.1%)	20 (2.0%)	22 (1.5%)	3 (0.9%)
astma	166 (9.2%)	94 (9.6%)	128 (8.7%)	32 (9.4%)
cancer	36 (2.0%)	28 (2.9%)	42 (2.8%)	9 (2.7%)
diabetes	182 (10%)	117 (12%)	175 (12%)	12 (3.5%)
obesity	183 (10%)	218 (22%)	238 (16%)	56 (17%)
arthritis	121 (6.7%)	102 (10%)	121 (8.2%)	29 (8.6%)
back_pain	631 (35%)	348 (35%)	388 (26%)	131 (39%)
gastric_or_duodenal_ulcers	56 (3.1%)	31 (3.2%)	24 (1.6%)	12 (3.5%)
chronic_lung_disease	24 (1.3%)	36 (3.7%)	45 (3.0%)	7 (2.1%)
skin_diseases_eczema	156 (8.7%)	102 (10%)	93 (6.3%)	38 (11%)
allergy	364 (20%)	178 (18%)	229 (16%)	83 (24%)
migraine	223 (12%)	94 (9.6%)	63 (4.3%)	42 (12%)
pain_of_unclear_origin	99 (5.5%)	65 (6.6%)	45 (3.0%)	14 (4.1%)
for_wom_pain_in_the_small_	68 (3.8%)	35 (3.6%)	27 (1.8%)	37 (11%)
depression_anxiety	125 (6.9%)	102 (10%)	150 (10%)	40 (12%)
thyroid_disease	152 (8.4%)	110 (11%)	134 (9.1%)	46 (14%)
General_health	1.00 (1.00, 3.00)	2.00 (1.00, 3.00)	1.00 (0.00, 2.00)	2.00 (1.00, 3.00)

[1] n (%); Median (IQR)

Author Contributions: For research articles with several authors, a short paragraph specifying their individual contributions must be provided. The following statements should be used "X.X. and Y.Y. conceive and designed the experiments; X.X. performed the experiments; X.X. and Y.Y. analyzed the data; W.W. contributed reagents/materials/analysis tools; Y.Y. wrote the paper.'' Authorship must be limited to those who have contributed substantially to the work reported.

Conflicts of Interest: Declare conflicts of interest or state 'The authors declare no conflict of interest.' Authors must identify and declare any personal circumstances or interest that may be perceived as inappropriately influencing the representation or interpretation of reported research results. Any role of the funding sponsors in the design of the study; in the collection, analyses or interpretation of data in the writing of the manuscript, or in the decision to publish the results must be declared in this section. If there is no role, please state 'The founding sponsors had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, an in the decision to publish the results'.

Abbreviations

The following abbreviations are used in this manuscript:

MDPI	Multidisciplinary Digital Publishing Institute
DOAJ	Directory of open access journals
TLA	Three letter acronym
LD	linear dichroism
MSE	Mean Square Error

Appendix A

Appendix A.1

The appendix is an optional section that can contain details and data supplemental to the main text. For example, explanations of experimental details that would disrupt the flow of the main text, but nonetheless remain crucial to understanding and reproducing the research shown; figures of replicates for experiments of which representative data is shown in the main text can be added here if brief, or as Supplementary data. Mathematical proofs of results not central to the paper can be added as an appendix.

Appendix B

All appendix sections must be cited in the main text. In the appendixes, Figures, Tables, etc. should be labeled starting with 'A', e.g., Figure A1, Figure A2, etc.

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Sample Availability: Data used for the analysis in this study as well as the code are publically avalible nad can be found on the Open Scienfe Network webside (https://osf.io/ad6b3/).